

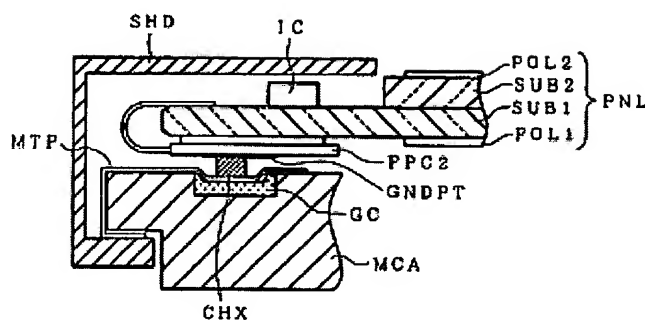
LIQUID CRYSTAL DISPLAY DEVICE**Patent number:** JP11305205**Publication date:** 1999-11-05**Inventor:** SHODA KATSUHIKO; HASEGAWA KAORU;
KOBAYASHI KENGO; TORIYAMA YOSHIO**Applicant:** HITACHI LTD;; HITACHI DEVICE ENG CO LTD**Classification:****- International:** G02F1/1333; G09F9/00**- european:****Application number:** JP19980111818 19980422**Priority number(s):****Also published as:**

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Abstract of JP11305205

PROBLEM TO BE SOLVED: To narrow the frame of a liquid crystal display device by adopting an electric connection structure between a flexible substrate and an upper case, shock resistance holding structure between a liquid crystal display element and a light transmission body and calking structure between upper and lower cases.

SOLUTION: The lower case MCA is arranged on the lower side of the liquid crystal display element PNL and stores an illuminating light source consisting of a linear light source arranged along the light transmission body and a reflection sheet formed on the lower surface of the light transmission body. The metallic upper case SHD has a window in the effective display area of the element PNL, is bent to the direction of the lower case MCA and fixed on the lower case MCA by calking. A chip part CHX has a conductive area fitted to a ground pattern GNDPT. One end part of a metallic tape MTP is inserted into the calked part and the other end part is arranged on a position opposed to the chip part CHX. In the integrated state of the upper and lower cases SHD, MCA, the ground pattern GNDPT and the lower case MCA are electrically connected through the conductive area.



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